BC College and Institute Student Outcomes ISSUE PAPER Spring 2000 Vol. 1 No. 2

Gender Differences in BC College and Institute Student Outcomes

ISSN 1492-3718

ISSUE PAPER HIGHLIGHTS

- Female former students have higher GPA's than male students.
- 69% of former male students are employed full-time, compared to 60% of female students.
- Female former students are more likely to say that their jobs are "very" or "somewhat" related to their training.
- Provincially, female former students have lower median monthly salaries

Introduction

In a recent report, the Fraser Institute raised concerns regarding gender differences in academic performance within British Columbia's public education system, at the K-12 level. Numerous reasons have been put forward to explain why male students do not perform as well academically as female students. These include criticism that teaching styles and testing favour female students,[1] and cultural factors that supposedly downplay the importance of school for males.[2] Data from the BC College and Institute Student Outcomes Survey reveal that academic differences exist between female and male students at colleges and institutes as well. These data also reveal that female and male students' academic performance is not consistent with their out-of-school outcomes.

This paper investigates and offers possible explanations for gender differences in education and employment outcomes at BC's colleges and institutes, at the provincial and program area (arts and sciences, and applied) levels. Survey findings show that although female students perform better academically and are more satisfied with their studies, former male students experience more favourable labour market outcomes; for example, males generally earn more and are more likely to be employed full-time.

The findings also confirm that the programs that female and male students choose and their subsequent training-related occupations are very different.

This paper uses data from the 1998 BC College and Institute Student Outcomes Survey Project. The Outcomes project collects and disseminates information about former students' post-secondary experiences and their subsequent labour market and further education outcomes. This annual survey collects data from students 9-12 months after completing all, or a significant portion, of their educational program.

Demographics

Provincially, females comprise 55 percent of survey respondents. 52 percent of former applied students were female, where females represented 61 percent of former arts & sciences students.

The median age for female survey respondents in 1998 was 25 years old, a full year older than their male counterparts; this also holds true at the program area level.

In School Experience

Cumulative GPA

An important measure of a students' academic achievement is their cumulative grade point average (GPA). In this sample, there was a statistically significant difference between the GPAs of female and male students.

Table 2.1
Mean of Cumulative GPA by Gender
Respondents in 1998

	Female	Male
Provincial total	3.01	2.84
Former Applied students	3.13	2.94
Former Arts & Sciences students	2.87	2.75

Female former students had a higher grade point average, even when controlled for program area. Higher GPAs for female former students are consistent with past outcomes survey data.

About Issue Papers

Issue papers are brief studies that examine data taken from the annual BC College and Institute Student Outcomes Survey.

Each year six issue papers are released covering different topics and subjects.

For More Information Contact

Tony Eder
Centre For Education Information
1483 Douglas St., Victoria, B.C., Canada. V8W 3K4
Tel: 250-413-4000 Email: teder@ceiss.org

Centre For Education Information
BRITISH COLUMBIA
Outcomes Working Group

BC College and Institute Student Outcomes ISSUE PAPER Spring 2000 Vol. 1 No. 2

Gender Differences in BC College and Institute Student Outcomes

ISSN 1492-3718

ISSUE PAPER HIGHLIGHTS

- Female former students have higher GPA's than male students.
- 69% of former male students are employed full-time, compared to 60% of female students.
- Female former students are more likely to say that their jobs are "very" or "somewhat" related to their training.
- Provincially, female former students have lower median monthly salaries

Introduction

In a recent report, the Fraser Institute raised concerns regarding gender differences in academic performance within British Columbia's public education system, at the K-12 level. Numerous reasons have been put forward to explain why male students do not perform as well academically as female students. These include criticism that teaching styles and testing favour female students, and cultural factors that supposedly downplay the importance of school for males. Data from the BC College and Institute Student Outcomes Survey reveal that academic differences exist between female and male students at colleges and institutes as well. These data also reveal that female and male students' academic performance is not consistent with their out-of-school outcomes.

This paper investigates and offers possible explanations for gender differences in education and employment outcomes at BC's colleges and institutes, at the provincial and program area (arts and sciences, and applied) levels. Survey findings show that although female students perform better academically and are more satisfied with their studies, former male students experience more favourable labour market outcomes; for example, males generally earn more and are more likely to be employed full-time.

The findings also confirm that the programs that female and male students choose and their subsequent training-related occupations are very different.

This paper uses data from the 1998 BC College and Institute Student Outcomes Survey Project. The Outcomes project collects and disseminates information about former students' post-secondary experiences and their subsequent labour market and further education outcomes. This annual survey collects data from students 9-12 months after completing all, or a significant portion, of their educational program.

Demographics

Provincially, females comprise 55 percent of survey respondents. 52 percent of former applied students were female, where females represented 61 percent of former arts & sciences students.

The median age for female survey respondents in 1998 was 25 years old, a full year older than their male counterparts; this also holds true at the program area level.

In School Experience

Cumulative GPA

An important measure of a students' academic achievement is their cumulative grade point average (GPA). In this sample, there was a statistically significant difference between the GPAs of female and male students.

Table 2.1
Mean of Cumulative GPA by Gender
Respondents in 1998

	Female	Male
Provincial total	3.01	2.84
Former Applied students	3.13	2.94
Former Arts & Sciences students	2.87	2.75

Female former students had a higher grade point average, even when controlled for program area. Higher GPAs for female former students are consistent with past outcomes survey data.

About Issue Papers

Issue papers are brief studies that examine data taken from the annual BC College and Institute Student Outcomes Survey.

Each year six issue papers are released covering different topics and subjects.

For More Information Contact

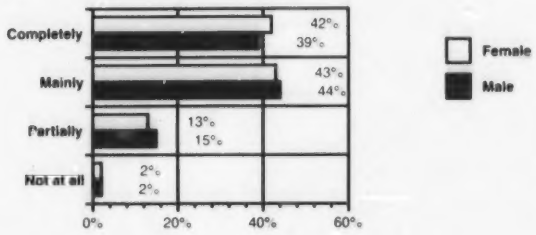
Tony Eder
Centre For Education Information
1483 Douglas St., Victoria, B.C. Canada V8W 3K4
Tel: 250-413-4000 Email: teder@ceiss.org

Centre For Education Information
BRITISH COLUMBIA
Outcomes Working Group

Satisfaction Level

Satisfaction with academic studies may also be a contributing factor in performance differences, or vice versa

Figure 2.1
Provincial Satisfaction Level by Gender
(Respondents in 1998)



Overall, the data reveals that female students are slightly more satisfied with their studies. Similar results were found for both applied programs and arts and science programs.

Types of Programs

Data reveal that traditionally male and female students choose different programs, and 1998 was no exception. This was true for both applied and arts and sciences program areas, although it was more significant among men and women in applied programs.

The most common programs for female former students in applied programs (categorized by their Classification of Instruction Program (CIP) code) include training for traditional 'caring' occupations such as Home Health Aides, Administrative Assistants, Nursing and Early Childhood Education. This is quite different from the most common applied programs for former male students which include Engineering Technicians, Business Administration & Management, Welding, Automotive Mechanic/Technician, and Computer Systems Analysis.

The most common Arts and Science program for both male and female former students is Liberal Arts and Sciences/Liberal Studies.

Co-operative Education

Male former students were twice as likely to have participated in a co-operative education program, which is defined as involving paid work terms and recognized by the Ministry of Advanced Education, Training and Technology. There are a number of possible explanations for this pattern. For example, the more common programs for males have a greater chance of involving a co-op component than programs popular among females. Also, some of the programs chosen more often by female students had practicums (un-paid work terms), which are not considered co-op programs.

Current Activity

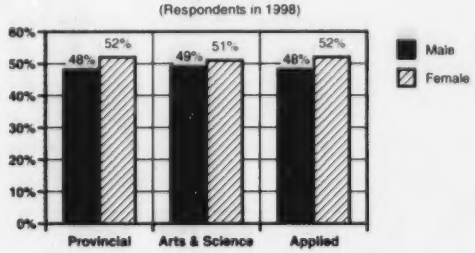
The current activity (what former students were doing at the time of the survey) of both male and female former students was quite similar. Slightly more than 50 percent of both female and male former students were working. Approximately 20 percent of former male and female students were working and studying. Sixteen percent of both genders were only studying, while 11 percent of both genders were involved in other activities.

Further Education Outcomes

There were few differences in further education outcomes for male and female respondents. Roughly the same percentage of both genders were currently studying at the time of the survey, and had taken further studies since leaving. These similarities were true at the provincial and program levels.

Of former students who were in further studies related to their initial program, female students were more likely to report feeling very well prepared for further education.

Figure 3.1
% Who Felt Very Well Prepared for Further Studies
By Gender
(Respondents in 1998)

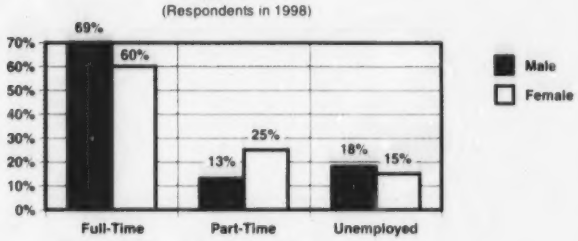


102-03295/

Labour Market Outcomes

Eighty-eight percent of male former students were in the labour force, compared to 85 percent of females. Male students were more likely than their female counterparts to be working full-time and to be unemployed. Conversely, female students were considerably more likely to be employed part-time. The employment outcomes of working only and working & studying have similar patterns. Former students who were working only were more likely to be working full-time, as one would expect. These results are consistent among former applied and arts & science students.

Figure 4.1
Labour Market Outcomes
By Gender
(Respondents in 1998)



Only includes individuals in the labour force

The fact that female students were less likely to be unemployed but more likely to be employed part-time may be related to the need to balance work and family or to the types of occupations females pursue which tend not to be full-time.

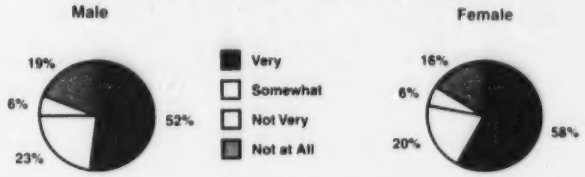
Respondents who were not working were asked why they were not working. Their answers provided evidence to suggest possible explanations for their labour market situation.

Of former students who were looking for work, both genders were equally likely to report that they could not find a job, had been laid off, or were attending school. Male respondents were more likely to say that the salary was too low in available jobs, whereas female respondents cited 'caring for family or other responsibilities' most often. In fact, 19 percent of former female students who specified a health reason for not working were either pregnant or recently had a child. 82 percent of respondents who gave the reason 'caring for family or other responsibilities' for not working were female.

Relation of Training to Employment

Former students who were employed at the time of the survey and whose program was intended to lead to a job were asked to relate their employment to their training. More female former students than male said their employment was very related to their training. This is true at the provincial level, as well as at the program level.

Figure 4.2
Provincial, Male and Female
Relationship of Employment to Training



Employed female former students tended to feel that their training was more useful in getting and performing their job than did male students. Figures 4.3 and 4.4 demonstrate, at the provincial level, the four-point scale on which the usefulness of their training was ranked. This pattern was fairly consistent at the program level as well.

Most Common Training-Related Occupations

An explanation for the labour market trends these former students experienced, such as the number of hours they worked, why they were not working and the relation of training to employment may be found in the types of training-related occupations they had. As can be seen in table 4.1, traditional gender roles are reflected in the training related employment that former students choose.

Figure 4.3 and 4.4
Provincial, Male and Female

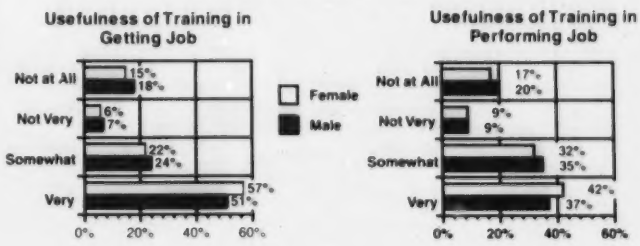


Table 4.1
5 Most Common Training-Related Occupations
Provincial, Female and Male

Female	Male
Registered Nurses	Welders
Nurse Aides & Orderlies	Motor Vehicle Mechanics
Early Childhood Educators	Computer Programmers
Community & Social Service Workers	Cooks
Housekeepers & Rel. Occs	Drafting Technologists & Technicians

The most common occupation for former female applied students was Registered Nurses, followed by Nurse Aides & Orderlies and Early Childhood Educators.

Male students from applied programs were most likely employed as Welders, Computer Programmers and Motor Vehicle Mechanics. The most common training-related occupations were in Community and Social Services.

Traditional 'caring' occupations, which were most common with female students, historically pay less than technical/trade occupations. Wage data indicate that there is a marked difference between female and male full-time salaries. This wage gap is even more pronounced when part-time work is considered, since female former students were less likely to be working full-time.

Conclusion

Female students in this survey were more successful in school than their male former classmates, where success is defined as a higher cumulative GPA and higher satisfaction levels. Both males and females tended to make similar further education decisions.

Once in the labour market, there is a marked difference between each gender's experiences. Female students found that their training was more useful in getting and performing their jobs. Females also felt that their jobs were more related to their training.

Male students were more likely to be working full-time and considerably less likely to be working part-time. The most common occupations related to their training are surprising in the sense that a similar list might have emerged forty years ago. There is also a traditional gap in full-time salaries between the genders.

It can then be argued that while female students are more successful in school, males do better in the labour market. These findings seriously compromise any argument that suggests that males are at a greater disadvantage because they are lagging behind academically.

References

[1] Steffenhagen, Janet. *Boys may just need to be taught differently.* The Vancouver Sun, Saturday October 23, 1999.
[2] Todd, Douglas. *In a girl's world, it can be tough being a boy.* The Vancouver Sun, Saturday, January 10, 1998.
Fraser Institute (1999) *Boys, Girls and Grades: How do Girls and Boys Compare across the Province.* www.fraserinstitute.ca/publications/pps/26/provincial_comparison.htm

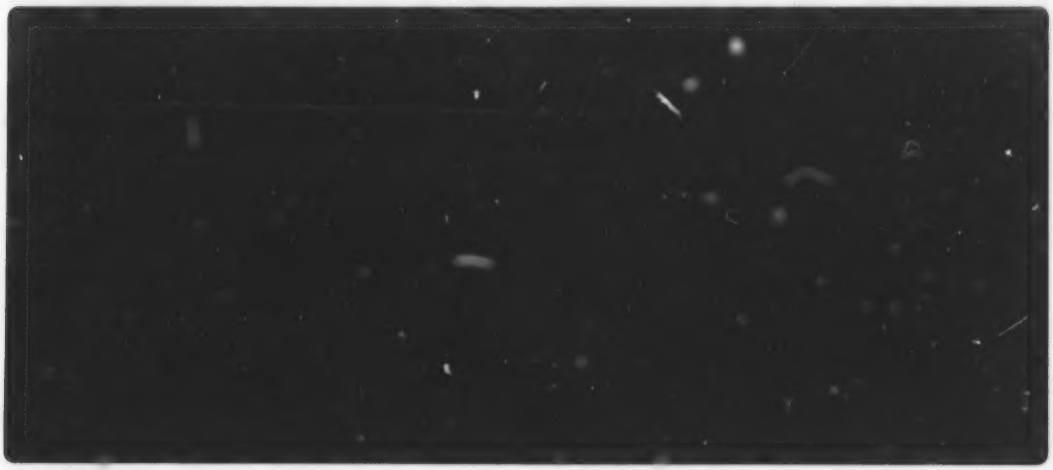


Table 4.1
5 Most Common Training-Related Occupations
Provincial, Female and Male

Female	Male
Registered Nurses	Welders
Nurse Aides & Orderlies	Motor Vehicle Mechanics
Early Childhood Educators	Computer Programmers
Community & Social Service Workers	Cooks
Housekeepers & Rel. Occs.	Drafting Technologists & Technicians

The most common occupation for former female applied students was Registered Nurses, followed by Nurse Aides & Orderlies and Early Childhood Educators.

Male students from applied programs were most likely employed as Welders, Computer Programmers and Motor Vehicle Mechanics. The most common training-related occupations were in Community and Social Services.

Traditional 'caring' occupations, which were most common with female students, historically pay less than technical trade occupations. Wage data indicate that there is a marked difference between female and male full-time salaries. This wage gap is even more pronounced when part-time work is considered, since female former students were less likely to be working full-time.

Conclusion

Female students in this survey were more successful in school than their male former classmates, where success is defined as a higher cumulative GPA and higher satisfaction levels. Both males and females tended to make similar further education decisions.

Once in the labour market, there is a marked difference between each gender's experiences. Female students found that their training was more useful in getting and performing their jobs. Females also felt that their jobs were more related to their training.

Male students were more likely to be working full-time and considerably less likely to be working part-time. The most common occupations related to their training are surprising in the sense that a similar list might have emerged forty years ago. There is also a traditional gap in full-time salaries between the genders.

It can then be argued that while female students are more successful in school, males do better in the labour market. These findings seriously compromise any argument that suggests that males are at a greater disadvantage because they are lagging behind academically.

References

Steffenhagen, Janet. *Boys may just need to be taught differently*. The Vancouver Sun. Saturday, October 23, 1999.

Todd, Douglas. *In a girl's world, it can be tough being a boy*. The Vancouver Sun. Saturday, January 10, 1998.

Fraser Institute (1999). *Boys, Girls and Grades: How do Girls and Boys Compare across the Province*. www.fraserinstitute.ca/publications/pps/26/provincial_comparison.htm

About the College & Institute Student Outcomes Survey Project

The BC College and Institute Student Outcomes Survey Project is jointly funded by Human Resources and Development Canada and the Ministry of Advanced Education, Training and Technology, under the Canada/BC Strategic Initiative Program, and BC's public colleges and institutes.

The British Columbia Outcomes Working Group (OWG) oversees all aspects of the project, from data collection through to the reporting of results. The OWG is a decade-old partnership between colleges and institutes and system bodies, such as the Ministry of Advanced Education, Training and Technology, the Advanced Education Council of BC and the BC Council of Admissions and Transfer. The partnership is one of shared interests, funding and expertise.

The survey results are used:

- by colleges and institutes to evaluate program offerings and services;
- to support decision making and program evaluation by the Ministry;
- to enhance understanding of the labour market; and
- to assist new students in selecting their educational programs.

BC College and Institute Student Outcomes ISSUE PAPER Spring 2000 Vol. 1 No. 2